AF
DW

PTO/SB/21 (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission 34

Application Number	09/853,174
Filing Date	05/10/2001
First Named Inventor	Johan Cornelis Talstra
Art Unit	2134
Examiner Name	Piotr Poltorak
Attorney Docket Number	NI000262

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	Remarks This communication contains an Amended Appeal Brief in response to the Notice of Non-compliant Appeal Brief mailed November 28, 2006.	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	LEIMBACH ASSOCIATES		
Signature			
Printed name	James D. Leimbach		
Date	December 28, 2006	Reg. No.	34,374

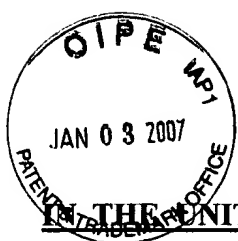
CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	James D. Leimbach	Date	December 28, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND
INTERFERENCES

In re Application of:
Johan Cornelis Talstra, et al.

Title: COPY PROTECTION
SYSTEM

Serial No. 09/853,174

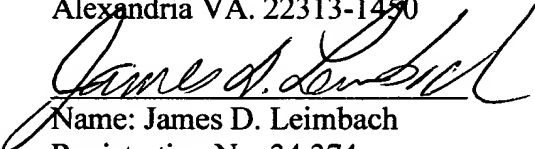
Filed: May 10, 2001

Confirmation No.: 5915

Group Art Unit: 2134

Examiner: Piotr Poltorak

I hereby certify that this
correspondence is being deposited
today with the United States Postal
Services as first class mail in an
envelope addressed to:
Mail Stop Appeal Brief-Patent
Commissioner for Patents
P.O. Box 1450
Alexandria VA. 22313-1450


Name: James D. Leimbach
Registration No. 34,374
Date: December 28, 2006

Mail Stop Appeal Brief-Patent
Honorable Commissioner of Patents and Trademarks
Alexandria VA. 22313-1450

Sir:

AMENDED APPEAL BRIEF UNDER 37 C.F.R. § 41.37(d)

This paper contains an Amended Appeal Brief under the provisions of 37 C.F.R.
§41.37(d) in response to the Notice of Non-compliant Appeal Brief mailed November 28, 2006.

Serial No. 09/853,174

Real party in interest

The real party of interest is the Assignee who is U. S. Philips Corporation, a corporation existing under the laws of the State of Delaware (hereinafter Appellant).

Related appeals and interferences

There are no related appeals or interferences to the present application that are known to appellants, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of the Claims

Claims 1-7, 10-22 are drawn to a method and apparatus for storing and reading information from an information carrier. A copy of appealed claims 1-7 and 10-22 is contained in Appendix III following this brief.

Status of the Amendments After Final

A response was filed subsequent to the final rejection to overcome the Examiner's rejection of claims 10-12 and 21-22 under the provisions of 35 U.S.C. §112, second paragraph; claims 1-3 and 13-20 under the provisions of 35 U.S.C. §102(a); and claims 4-7, 10-12 and 21-22 under the provisions of 35 U.S.C. §103(a). The Examiner in an Advisory Action dated May 8, 2006 indicated that the rejections of claims 1-20 under 35 U.S.C. §103(a) stand.

Summary of the Claimed Subject Matter

The appealed claims define subject matter for a method and apparatus for storing and reading out information from an information carrier, the information including at least a first signal of at least partly encrypted content as discussed in the specification as originally submitted.

Appealed claim 1 defines subject matter for an apparatus for reading out information from an information carrier 17 as illustrated in Figure 1. The apparatus illustrated in Figure 1 is described in the specification as originally filed on page 7, line 31-page 8, line 28, wherein driving means 26 rotates information carrier 17 and reading head 27 reads tracks present on information carrier 17. The read head includes an optical system to focus light 29 into a light

spot 28 on a track of information carrier 17. The light 29 originates from radiation source 41 and is reflected from information carrier 17 and detected by detector 42. The information read out from information carrier 17 includes at least a first signal of at least partly encrypted content as discussed in the specification as originally filed on page 1, lines 1-5, page 2, lines 16-18 and page 8, line 30.

Appealed claim 1 further defines means for detecting a second signal logically embedded in the first signal; here, Figure 2 illustrates trigger detecting unit 10 checks the encrypted content read from information carrier 17 for an embedded trigger, i.e. second signal in the encrypted content. See specification on page 8, lines 29-32. The result from the check performed by the trigger detecting unit 10 is provided to play control unit 11 along with the result for detection of a wobble signal. The appellants, respectfully, note that the second signal contains a single bit trigger embedded according to embodiments described in the specification as originally filed on page 4, lines 18-25; page 5, lines 22-28; page 8, lines 29-32; page 10, line 4-page 11, line 2; page 11, lines 3-29; and page 11, line 30-page 13, line 12.

Appealed claim 1 further defines means for detecting a physical mark used for storing at least part of the information on the information carrier. The specification as originally submitted on page 1, line 26-page 2, line 4, describes the detection of the wobble using Differential Phase Detection (DPD)-radial servo-tracking signal. The specification on page 8, lines 8-25 describes a detector 42 of a known type such as a quadrant detector receiving reflected light from the information carrier 17 and generating signals such as read, tracking-error, focus-error and synchronization. The specification on page 6, lines 19-23 describes the advantages of using the wobble signal as the second signal and the specification on page 6, line 33 states that wobble detection only requires 5000-6000 gates within the drive apparatus. Figure 2 (as discussed in the specification on page 8, lines 8-25 wherein detector 42 detects light reflected from information carrier 17). The specification on page 8, lines 29-33 states that the wobble signal (physical mark) if detected is provided to play control unit 11.

Appealed claim 1 further defines means for refusing play back (playback control unit 11) of the information read from the information carrier 17 if the second signal but no physical mark has been detected as discussed in the specification on page 9, lines 1-2. The playback control unit 11 receives the result of the second signal being embedded in the encrypted

content in parallel with the detected wobble signal (see page 8, lines 29-33) and decides if playback should be allowed (page 9, lines 1-2).

Appealed claim 13 defines a method of reading out information from an information carrier 17 as illustrated in Figure 1 and described in the specification as originally filed on page 7, line 31-page 8, line 28, wherein driving means 26 rotates information carrier 17 and reading head 27 reads tracks present on information carrier 17. The read head includes an optical system to focus light 29 into a light spot 28 on a track of information carrier 17. The light 29 originates from radiation source 41 and is reflected from information carrier 17 and detected by detector 42. The information read out from information carrier 17 includes at least a first signal of at least partly encrypted content as discussed in the specification as originally filed on page 1, lines 1-5, page 2, lines 16-18 and page 8, line 30. The information including at least a first signal of at least partly encrypted content (as discussed in the specification on page 8, lines 30). The steps of the method are discussed in the specification on page 9, lines 3-9.

Appealed claim 13 further defines detecting a second signal logically embedded in the first signal wherein the second signal contains an encrypted trigger, as illustrated in Figures 2 and 3 discussed in the specification on page 8, lines 29-32 and page 9, lines 3-9. Figure 2 illustrates trigger detecting unit 10 checks the encrypted content read from information carrier 17 for an embedded trigger, i.e. second signal in the encrypted content. See specification on page 8, lines 29-32. The result from the check performed by the trigger detecting unit 10 is provided to play control unit 11 along with the result for detection of a wobble signal. The appellants, respectfully, note that the second signal contains a single bit trigger embedded according to embodiments described in the specification as originally filed on page 4, lines 18-25; page 5, lines 22-28; page 8, lines 29-32; page 10, line 4-page 11, line 2; page 11, lines 3-29; and page 11, line 30-page 13, line 12. The method as described on page 9, lines 3-9 describes detecting a second signal logically embedded in the first signal wherein the second signal contains an encrypted trigger, as first step 100 checking for trigger present and decision step 101 decides if the trigger is present.

Appealed claim 13 further defines detecting a physical mark used for storing at least part of the information on the information carrier, The specification as originally submitted on page 1, line 26-page 2, line 4 describes the detection of the wobble using Differential Phase Detection (DPD)-radial servo-tracking signal. The specification on page 8, lines 8-25 describes

a detector 42 of a known type such as a quadrant detector receiving reflected light from the information carrier 17 and generating signals such as read, tracking-error, focus-error and synchronization. The specification on page 6, lines 19-23 describes the advantages of using the wobble signal as the second signal and the specification on page 6, line 33 states that wobble detection only requires 5000-6000 gates within the drive apparatus. Figure 2 (as discussed in the specification on page 8, lines 8-25 wherein detector 42 detects light reflected from information carrier 17). The specification on page 8, lines 29-33 states that the wobble signal (physical mark) if detected is provided to play control unit 11. The method shown in Figure 3, step 102 is to check if wobble is present.

Appealed claim 13 further defines refusing playback (playback control unit 11) of the information read from the information carrier if the second signal but no physical mark has been detected as discussed in the specification on page 9, lines 1-2. The playback control unit 11 receives the result of the second signal being embedded in the encrypted content in parallel with the detected wobble signal (see page 8, lines 29-33) and decides if playback should be allowed (page 9, lines 1-2). Figure 3 as discussed on page 9, lines 3-9 of the specification discusses step 103 which allows and prohibits playback based on the presence of the wobble (physical mark).

Appealed claim 14 defines an apparatus for storing information on an information carrier 17 (as illustrated in Figures 1 and 7), the information including at least a first signal of at least partly encrypted content (as discussed in the specification on page 8, lines 30; and page 13 lines 13-24). The apparatus illustrated in Figure 1 is described in the specification as originally filed on page 7, line 31-page 8, line 28, wherein driving means 26 rotates information carrier 17 and reading head 27 reads tracks present on information carrier 17. The read head includes an optical system to focus light 29 into a light spot 28 on a track of information carrier 17. The light 29 originates from radiation source 41 and is reflected from information carrier 17 and detected by detector 42. The information read out from information carrier 17 includes at least a first signal of at least partly encrypted content as discussed in the specification as originally filed on page 1, lines 1-5, page 2, lines 16-18 and page 8, line 30.

Appealed claim 14 further defines means for using a physical mark for storing at least part of the information on the information carrier (as discussed in the specification on page 8, line 31-32 and the general discussion on page 8, lines 8-25 wherein detector 42 detects light

reflected from information carrier 17; and page 13 lines 13-24). The specification as originally submitted on page 1, line 26-page 2, line 4, describes the detection of the wobble using Differential Phase Detection (DPD)-radial servo-tracking signal. The specification on page 8, lines 8-25 describes a detector 42 of a known type such as a quadrant detector receiving reflected light from the information carrier 17 and generating signals such as read, tracking-error, focus-error and synchronization. The specification on page 6, lines 19-23 describes the advantages of using the wobble signal as the second signal and the specification on page 6, line 33 states that wobble detection only requires 5000-6000 gates within the drive apparatus. Figure 2 (as discussed in the specification on page 8, lines 8-25 wherein detector 42 detects light reflected from information carrier 17). The specification on page 8, lines 29-33 states that the wobble signal (physical mark) if detected is provided to play control unit 11.

Appealed claim 14 further define means for logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which second signal contains a single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected as illustrated in Figure 2 and discussed in the specification on page 8, lines 29-32; and Figure 7 and discussed in the specification on page 13 lines 13-24. See specification on page 8, lines 29-32. The result from the check performed by the trigger detecting unit 10 is provided to play control unit 11 along with the result for detection of a wobble signal. The appellants, respectfully, note that the second signal contains a single bit trigger embedded according to embodiments described in the specification as originally filed on page 4, lines 18-25; page 5, lines 22-28; page 8, lines 29-32; page 10, line 4-page 11, line 2; page 11, lines 3-29; and page 11, line 30-page 13, line 12.

Appealed claim 16 defines subject matter for a method of storing information on an information carrier (as illustrated in Figures 1 and 7), the information including at least a first signal of at least partly encrypted content (as discussed in the specification on page 8, lines 30; and page 13 lines 13-24) using a physical mark for storing at least part of the information on the information carrier (as discussed in the specification on page 8, line 31-32 and the general discussion on page 8, lines 8-25 wherein detector 42 detects light reflected from information carrier 17; and page 13, lines 13-24).

Appealed claim 16 further defines logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, the second signal containing a single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected as illustrated in Figure 2 and discussed in the specification on page 8, lines 29-32; and Figure 7 and discussed in the specification on page 13 lines 13-24. The appellants, respectfully, note that the second signal contains a single bit trigger embedded according to embodiments described in the specification as originally filed on page 4, lines 18-25; page 5, lines 22-28; page 8, lines 29-32; page 10, line 4-page 11, line 2; page 11, lines 3-29; and page 11, line 30-page 13, line 12.

Appealed claim 17 defines subject matter for an information carrier for storing information (as illustrated in Figures 1 and 7) including at least a first signal of at least partly encrypted content (as discussed in the specification on page 8, lines 30; and page 13 lines 13-24).

Appealed claim 17 further defines a physical mark for storing at least part of the information on the information carrier, and a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier (as discussed in the specification on page 8, line 31-32 and the general discussion on page 8, lines 8-25 wherein detector 42 detects light reflected from information carrier 17; and page 13, lines 13-24), the second signal containing a single bit trigger that may be used for refusing play back of the information read from the information carrier if a second signal but no physical mark has been detected as illustrated in Figure 2 and discussed in the specification on page 8, lines 29-32; and Figure 7 and discussed in the specification on page 13 lines 13-24.

Appealed claim 19 defines subject matter for a method of exchanging copy protection information for protecting information stored on an information carrier (as illustrated in Figures 1, 3 and 7) including at least a first signal of at least partly encrypted content (as discussed in the specification on page 8, lines 30; and page 13 lines 13-24).

Appealed claim 19 further defines a physical mark is used for storing at least part of the information on the information carrier (as discussed in the specification on page 8, line 31-

32 and the general discussion on page 8, lines 8-25 wherein detector 42 detects light reflected from information carrier 17; and page 13, lines 13-24), the copy protection information includes a second signal containing a single bit trigger logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which copy protection information may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected as illustrated in Figure 2 and discussed in the specification on page 8, lines 29-32; and Figure 7 and discussed in the specification on page 13 lines 13-24.

Grounds of Rejection to be Reviewed on Appeal

The Advisory Action dated May 31, 2006 indicated that the rejections to claims 1-7 and 10-22 stand. Claims 1-7 and 10-22 are the appealed claims.

- I. Claims 10-12 and 21-22 are rejected under the provisions of 35 U.S.C. §112, second paragraph, for failing to set forth the subject matter that the appellants regard as the invention.
- II. Claims 1-3 and 13-20 under the provisions of 35 U.S.C. §102(a) as being anticipated by an article within C.B.S. Proceedings of the IEEE, Volume: 87, Issue: 7, July 1999, pp. 1267-1276), entitled "Copy protection for DVD video", authored by Bloom, J.A.; Cox, I.J.; Kalker, T.; Linnartz, J.-P.M.G.; Miller, M.L.; Traw, (hereinafter referred to as Bloom et al.).
- III. Claims 4-7, 10-11 and 21-22 under the provisions of 35 U.S.C. §103(a) as being unpatentable over International Publ. No. WO 99/11020 (Glogau et al.) in view Bloom et al.) and further in view of U.S. Patent No. 5,940,134 issued to Wirtz (hereinafter referred to as Wirtz).

Argument

I. The rejection of appealed claims 10-12 and 21-22 are rejected under the provisions of 35 U.S.C. §112, second paragraph, for failing to set forth the subject matter that the appellants regard as the invention

The MPEP at §2171 states that there are two separate requirements for claims under 35 U.S.C. 112, second paragraph. The second paragraph of 35 U.S.C. 112 is directed to requirements for the claims: The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. There are two separate requirements set forth in this paragraph: (A) the claims must set forth the subject matter that applicants regard as their invention; and (B) the claims must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant.

The first requirement is a subjective one because it is dependent on what the applicants for a patent regard as their invention. The second requirement is an objective one because it is not dependent on the views of applicant or any particular individual, but is evaluated in the context of whether the claim is definite - i.e., whether the scope of the claim is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art.

A. The rejection under 35 U.S.C. S 112, second paragraph

The rejection of claims 10-12 and 21-22 under the provisions of 35 U.S.C. §112, second paragraph, alleges that claims 10-12 and 21-22 fail to set forth the subject matter that the Applicants regard as the invention. The rejection asserts that the term within rejected claim 21 that its output is 1/s biased by interpreting emitted symbols "0"... 's-n-1' as 'unencrypted' and 's-n'...'s-1' as 'encrypted' is not understood.

The appellants, respectfully, assert that applicants have the right to be their own lexicographer and that the definition supplied by the specification to the present invention is to be used for interpretation of the same term as used in the claims.

The MPEP at §2111.01 states in Part III that Applicants may be their own Lexicographer. "An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly

setting forth a definition of the term that is different from its ordinary and customary meaning(s).” *In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994).

“Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim.” *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999).

B. Appealed claims 10-12 and 21-22

The Applicants, respectfully, remind the Examiner that the Applicants have the right to be their own lexicographer and that the definition supplied by the specification to the present invention is to be used for interpretation of the same term as used in the claims.

The MPEP at §2111.01 states in Part III that Applicants may be their own Lexicographer. “An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s).” *In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). “Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim.” *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999).

The embodiment of the invention wherein the linear feedback shift register is over Galois Field GF(s), and its output is 1/s biased by interpreting emitted symbols “0”...‘s-n-1’ as ‘unencrypted’ and ‘s-n’...’s-1’ as ‘encrypted’ is described in the specification of the present invention on page 5, lines 6-21. Specifically, it is stated on page 5, lines 13-15 “to create a biased pseudo-random sequence with bias 1/s (i.e. out of every s packs, s-1 are unencrypted and 1 is encrypted), with s prime, the polynomial should be chosen over GF(s)”. Therefore, the foregoing clearly states that out of every s blocks, 1 is encrypted. It is further stated on page 5, lines 15-17 that the “output of the LFSR is then a random sequence of elements 1_i of GF(s): 0, 1, 2, ..., s-1. If every 1_i is replaced by ‘u’ if $1_i \geq 1$, and by ‘e’ if $1_i = 0$, otherwise, a recipe to encrypt the packs with the required bias is obtained.” It is then clearly, and unequivocally stated on page 5, lines 17-21 that the foregoing “principle can be generalized to pseudo-random sequences with bias 1/s, where s is not just prime, but the power of a prime. In an embodiment the

linear feedback shift register is over Galois field GF(s) and its output is biased by interpreting emitted symbols '0' . . . 's-n-1' as 'unencrypted' and 's-n' . . . 's-l' as 'encrypted'." Accordingly, the terminology that the examiner asserts is not understood is clearly defined by the specification. This clear definition must be applied for claim interpretation. The statement by the examiner that for the purpose of examination the phrase is treated as though bits other 0's represent encryption has no basis in the rejected claims or within the clear definition that is supplied by the specification. The term its output is 1/s biased by interpreting emitted symbols "0"... 's-n-1' as 'unencrypted' and 's-n'...'s-l' is defined to be a generalization of the above described operation. This is the definition that is supplied by the specification to the present invention. Applicants have the right to be their own lexicographer, and the definition supplied to terms within the specification must be applied during interpretation of that term within the claims.

Regarding Claims 22 and 10-12, the examiner states that it is not clear how to embed a signal by selecting a key. The appellants draw the Board's attention to the specification on page 5, lines 22-24 wherein it is stated that "the second signal is embedded in the first signal by selecting a key for at least partly encrypting the information from one of at least two groups of keys." The appellants assert that this recitation within appealed claim 22 is abundantly clear. The selected key is used for at least partly encrypting information.

The appellants assert that the scope of the appealed claims 10-12 and 21-22 would be clear to person possessing an ordinary level of skill in the art.

II. The rejection of appealed Claims 1-3 and 13-20 under the provisions of 35 U.S.C. §102(a) as being anticipated by an article within C.B.S. Proceedings of the IEEE, Volume: 87, Issue: 7, July 1999, pp. 1267-1276), entitled Copy protection for DVD video", authored by Bloom, J.A.; Cox, I.J.; Kalker, T.; Linnartz, J.-P.M.G.; Miller, M.L.; Traw, (hereinafter referred to as Bloom et al.).

The examiner's position is that *Bloom et al.* teach copy protection for DVD using watermarking and that watermarking is a technique for hiding information directly in video.

The MPEP 2131 states that a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

B. The reference

Bloom et al. is directed to copy protection using watermarking and teach watermarking as a technique for hiding information directly in video on page 1269, col. 1. *Bloom et al.* further teach employing a wobble within a disc that can be detected upon insertion of a disc into a compliant drive to read the payload. *Bloom et al.* teach that a wobble can implement a ticket to control playback (see page 1275 col. 1). It is the basic premise of *Bloom et al.* that only if the transformed wobble bits match the additional watermark payload then playback allowed (see page 1275 col. 1).

Bloom et al. teach that if the transformed wobble bits match the additional watermark payload then playback is allowed. Note that there is no disclosure or suggestion within *Bloom et al.* for the subject matter of “a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, and on the second signal being used for refusing play black of the information read from the information carrier if the second signal but no physical mark is detected”. There is no disclosure or suggestion within *Bloom et al.* for any action to be taken if the wobble is not detected.

The wobble groove within *Bloom et al.* is the physical mark. Actions that are performed by *Bloom et al.* upon detection of the wobble groove do not disclose or suggest the occurrence of any action if the physical mark (the wobble groove) is not detected. It should be noted that that it is physically impossible for *Bloom et al.* to detect a second signal but no physical mark is detected.

C. The differences between the invention and the reference

The rejection alleges that *Bloom et al.* in teaching that only if the transformed wobble bits match the additional watermark payload then playback is

allowed is tantamount to disclosure of the subject matter for “a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, and on the second signal being used for refusing play back of the information read from the information carrier if the second signal but no physical mark is detected” as defined by the rejected claims. The appellant assert that these allegations within the rejection are without merit. There is no disclosure or suggestion within *Bloom et al.* for any action to be taken if the wobble is not detected. The appellants, respectfully, point out that *Bloom et al.* do not disclose or suggest any action that is taken or prevented from being taken upon the detection of the absence of a wobble groove (physical mark).

The rejection reads the wobble groove within *Bloom et al.* as being the physical mark as defined by the rejected claims. The rejection attempts to employ actions that are performed by *Bloom et al.* upon detection of the wobble groove with the clear recitation within the rejected claims of actions that occur if the physical mark (the wobble groove) is not detected. The rejection contradicts itself. The appellants, respectfully, point out that it is impossible for *Bloom et al.* to anticipate the rejected claims because the subject matter for the second signal but no physical mark is detected is not disclosed or suggested by *Bloom et al.*

Appealed claim1

Appealed claim 1 defines subject matter for an apparatus for reading out information from an information carrier, the information including at least a first signal of at least partly encrypted content, including: means for detecting a second signal logically embedded in the first signal wherein the second signal contains a single bit trigger, means for detecting a physical mark used for storing at least part of the information on the information carrier, and means for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for an apparatus for reading out information from an information carrier, the information including at least a first signal of at least partly encrypted content, including: means for detecting a second signal logically embedded in the first signal wherein the second signal contains a single bit trigger, means

for detecting a physical mark used for storing at least part of the information on the information carrier, and means for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

Appealed claim 2

Appealed claim 2 defines the subject matter for an apparatus according to appealed claim 1, wherein the apparatus is a CD-or a DVD- player. There is no disclosure or suggestion within *Bloom et al.* for an apparatus according to appealed claim 1, wherein the apparatus is a CD-or a DVD- player.

Appealed claim 2

Appealed claim 3 defines the subject matter for an apparatus according to appealed claim 1, wherein the physical mark is a wobble. There is no disclosure or suggestion within *Bloom et al.* for an apparatus according to appealed claim 1, wherein the physical mark is a wobble.

Appealed claim 13

Appealed claim 13 define subject matter for a method of reading out information from an information carrier, the information including at least a first signal of at least partly encrypted content, including the steps of: detecting a second signal logically embedded in the first signal wherein the second signal contains an encrypted trigger, detecting a physical mark used for storing at least part of the information on the information carrier, and refusing playback of the information read from the information carrier if the second signal but no physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for a method of reading out information from an information carrier, the information including at least a first signal of at least partly encrypted content, including the steps of: detecting a second signal logically embedded in the first signal wherein the second signal contains an encrypted trigger, detecting a physical mark used for storing at least part of the information on the information carrier, and refusing playback of the information read from the information carrier if the second signal but no physical mark has been detected.

Appealed claim 14

Appealed claim 14 defines subject matter for an apparatus for storing information on an information carrier, the information including at least a first signal of at least partly encrypted content, including: means for using a physical mark for storing at least part of the information on the information carrier, and means for logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which second signal contains a single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for an apparatus for storing information on an information carrier, the information including at least a first signal of at least partly encrypted content, including: means for using a physical mark for storing at least part of the information on the information carrier, and means for logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which second signal contains a single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

Appealed claim 15

Appealed claim 15 defines subject matter for an apparatus according to claim 14, wherein the apparatus is a CD-or a DVD-recorder. There is no disclosure or suggestion within *Bloom et al.* for an apparatus according to claim 14, wherein the apparatus is a CD-or a DVD-recorder.

Appealed claim 16

Appealed claim 16 defines subject matter for a method of storing information on an information carrier, the information including at least a first signal of at least partly encrypted content, comprising the steps of: using a physical mark for storing at least part of the information on the information carrier, and logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, the second signal containing a single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no

physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for a method of storing information on an information carrier, the information including at least a first signal of at least partly encrypted content, comprising the steps of: using a physical mark for storing at least part of the information on the information carrier, and logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, the second signal containing a single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

Appealed claim 17

Appealed claim 17 defines subject matter for an information carrier for storing information including at least a first signal of at least partly encrypted content, including: a physical mark for storing at least part of the information on the information carrier, and a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, the second signal containing a single bit trigger that may be used for refusing play back of the information read from the information carrier if a second signal but no physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for an information carrier for storing information including at least a first signal of at least partly encrypted content, including: a physical mark for storing at least part of the information on the information carrier, and a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, the second signal containing a single bit trigger that may be used for refusing play back of the information read from the information carrier if a second signal but no physical mark has been detected.

Appealed claim 18

Appealed claim 18 defines subject matter for an information carrier according to claim 17, wherein the information carrier is a CD-or a DVD-disc. There is no disclosure or suggestion within *Bloom et al.* for an information carrier according to claim 17, wherein the information carrier is a CD-or a DVD-disc.

Appealed claim 19

Appealed claim 19 defines subject matter for a method of exchanging copy protection information for protecting information stored on an information carrier including at least a first signal of at least partly encrypted content, wherein: a physical mark is used for storing at least part of the information on the information carrier, the copy protection information includes a second signal containing a single bit trigger logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which copy protection information may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for a method of exchanging copy protection information for protecting information stored on an information carrier including at least a first signal of at least partly encrypted content, wherein: a physical mark is used for storing at least part of the information on the information carrier, the copy protection information includes a second signal containing a single bit trigger logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which copy protection information may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

Appealed claim 19

Appealed claim 20 a copy protection system for exchanging copy protection information for protecting information stored on an information carrier including at least a first signal of at least partly encrypted content, including: an apparatus for storing information on an information carrier as in appealed claim 14 and an apparatus for reading out information from an information carrier, wherein the copy protection information including a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier is exchanged between both apparatuses, which copy protection information may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for a copy protection system for exchanging copy protection information for protecting information stored on an information carrier including at

least a first signal of at least partly encrypted content, including: an apparatus for storing information on an information carrier as in appealed claim 14 and an apparatus for reading out information from an information carrier, wherein the copy protection information including a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier is exchanged between both apparatuses, which copy protection information may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

III. The rejection of appealed claims 4-7, 10-11 and 21-22 under the provisions of 35 U.S.C. §103(a) as being unpatentable over *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz*

A. The rejection

Appealed claims 4-7, 10-11 and 21-22 are rejection under the provisions of 35 U.S.C. §103(a) as being unpatentable over *Glogau et al.* (International Publ. No. WO 99/11020) in view *Bloom et al.* and further in view of *Wirtz* (U.S. Patent No. 5,940,134).

The examiner's position is that *Glogau et al.* teach the first signal in which a second signal is logically embedded and that while *Glogau et al.* do not teach a physical mark used for storing at least part of the information on the information carrier and for refusing playback if the second signal bit no physical mark has been detected, *Bloom et al.* teach that a physical mark is used for storing information on the information carrier and refusing playback if the second signal but no physical mark has been detected.

The MPEP at §2111.01 states that an "applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s). See *In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994)."

The MPEP at §2143 states that to "establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

The MPEP at §2143.01 states that a "statement that modifications of the prior art to meet the claimed invention would have been ""well within the ordinary skill of the art" at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)."

The MPEP at §2143.01 further states that if the "proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)."

The MPEP at §2143.01 states that if "the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)."

B. The references

Glogau et al. teach the first signal in which a second signal is logically embedded. *Glogau et al.* do not teach a physical mark used for storing at least part of the information on the information carrier and for refusing playback if the second signal bit no physical mark has been detected.

Note that *Glogau et al.* on page 2, lines 14-17 states that the encryption sequence is substantially random, that can be generated based on a linear feedback register and that the encryption sequence is embedded into the carrier signal by performing an exclusive-OR of the encryption sequence with a portion of the carrier

signal. There is no disclosure or suggestion within *Glogau et al.* for the second signal being embedded in the first signal by encoding in a pseudo-random noise pattern in encrypted and unencrypted packs of the first signal, wherein the encryption sequence is generated based on a linear feedback register.

Bloom et al. do not teach that a physical mark is used for storing information on the information carrier and refusing playback if the second signal but no physical mark has been detected. There is no disclosure or suggestion within *Bloom et al.* for any action to occur if the wobble groove is not detected. It would be physically impossible for a first signal to be the wobble groove with a second signal embedded therein and detect the second signal in the absence of the first signal (e.g. the wobble groove).

There is no disclosure or suggestion within *Bloom et al.* for a second signal that is logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier. Additionally, there is no disclosure or suggestion within *Bloom et al.* for the second signal to contain a single bit trigger that may be used for refusing play back of the information read from the information carrier if a second signal but no physical mark has been detected.

Wirtz teaches to check the embedded watermark against the disc's wobble key and reproduce the signal if the authenticity of the signal is acknowledged. The examiner alleges that *Wirtz* in the Abstract and col. 2, lines 43-47 teaches that the first signal/physical mark in which a second signal is logically embedded, and which could be used for refusing play back of the information read from the information carrier if a second signal but no physical mark were detected. The examiner appears to be reading the first signal and the physical mark as being one in the same with the second signal being the disc's wobble key taught by *Wirtz* being embedded within the within the wobble groove (the physical mark).

C. The differences between the invention and the references

The rejection alleges that *Glogau et al.* teach the first signal in which a second signal is logically embedded. The rejection admits that *Glogau et al.* do not teach

a physical mark used for storing at least part of the information on the information carrier and for refusing playback if the second signal bit no physical mark has been detected.

The rejection alleges that *Bloom et al.* teach that a physical mark is used for storing information on the information carrier and refusing playback if the second signal but no physical mark has been detected. The construction made by the rejection is an impossible construction. The appealed claims define subject matter for “if a second signal but no physical mark is detected”. The appealed claims can not be read so broadly to as to encompass the wobble groove as the first signal because this would not be possible to in view of the wording of the rejected claims. The first signal can not be read as being the physical mark because if there is no physical mark, as defined by the appealed claims, the first signal and the second signal can still exist. Accordingly, the rejection does not address all the elements defined by the appealed claims.

There is no disclosure or suggestion within *Bloom et al.* for a second signal that is logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier. Additionally, there is no disclosure or suggestion within *Bloom et al.* for the second signal to contain a single bit trigger that may be used for refusing play back of the information read from the information carrier if a second signal but no physical mark has been detected.

The rejection alleges that *Wirtz* in the Abstract and col. 2, lines 43-47 teaches that the first signal/physical mark in which a second signal is logically embedded, and which could be used for refusing play back of the information read from the information carrier if a second signal but no physical mark were detected. The appellants, respectfully point out that *Wirtz* teaches to check the embedded watermark against the disc’s wobble key and reproduce the signal if the authenticity of the signal is acknowledged. The examiner appears to be reading the first signal and the physical mark as being one in the same with the second signal being the disc’s wobble key taught by *Wirtz* being embedded within the within the wobble groove (the physical mark). This construction is impossible because the rejected claims define subject matter for “if a second signal but no physical mark are detected”. Therefore, the rejected claims can not be read so broadly that the first signal encompasses the wobble groove because this is not possible in view of the wording of the rejected claims. The first signal can not be the

physical mark. Therefore, the rejection does not address all the elements defined by the rejected claims.

Accordingly, this rejection does not make a *prima facie* case of obviousness.

Regarding the rejection of claims 4-7 under the provisions of 35 U.S.C. §103(a) as being obvious over *Glogau et al.* in view Bloom et al. and further in view *Wirtz*, the examiner states that Glogau et al. in view *Bloom et al.* do not teach the linear feedback shift register (LFSR) being over a Galois Field. The examiner then asserts that the choice of a minimal and irreducible polynomial function would have been obvious to a person of ordinary skill within the art. The appellants, respectfully, point out that these assertions by the examiner amount to no more than a statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made and are not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)."

The rejection alleges that *Bloom et al.* that the second signal is embedded in the first signal by encoding a pseudo-random noise pattern of encrypted and unencrypted packs of the first signal, wherein the encryption sequence is generated based upon a linear feedback shift register. The appellants do not agree with this allegation. There is no disclosure or suggestion within *Bloom et al.* for the encryption sequence to be generated based upon the output of a linear feedback shift register.

The rejection further alleges that *Glogau et al.* teach the second signal being embedded in the first signal by encoding in a pseudo-random noise pattern in encrypted and unencrypted packs of the first signal, wherein the encryption sequence is generated based on a linear feedback register on page 2, lines 14-17. The appellants, respectfully, point out *Glogau et al.* on page 2, lines 14-17 simply states that the encryption sequence is substantially random, that can be generated based on a linear feedback register and that the encryption sequence is embedded into the carrier signal by performing an exclusive-OR of the encryption sequence with a portion of the carrier signal.

Appealed claim 4

Appealed claim 4 defines subject matter for an apparatus according to claim 1, wherein the single bit trigger is contained within a message containing encrypted and unencrypted packs. *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz*. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for an apparatus according to claim 1, wherein the single bit trigger is contained within a message containing encrypted and unencrypted packs.

Appealed claim 4 defines the apparatus of appealed claim 1, wherein the single bit trigger is contained within a message containing encrypted and unencrypted packs. The rejection does not address this feature and, therefore, does not make a *prima facie* case of obviousness. Furthermore, the subject matter of refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected is not found within any of the cited references.

Appealed claim 5

Appealed claim 5 defines the subject matter for an apparatus according to claim 1, wherein the second signal is embedded in the first signal by encoding it in a predetermined pattern of encrypted and unencrypted packs of the first signal. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for an apparatus according to claim 1, wherein the second signal is embedded in the first signal by encoding it in a predetermined pattern of encrypted and unencrypted packs of the first signal.

Appealed Claim 5 defines the apparatus of claim 1, wherein the second signal is embedded in the first signal by encoding it in a predetermined pattern of encrypted and unencrypted packs of the first signal. The rejection does not address this feature and, therefore, does not make a *prima facie* case of obviousness. Furthermore, as previously discussed, the subject matter of refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected is not found within any of the cited references.

Appealed claim 6

Appealed claim 6 defines subject matter for an apparatus according to claim 5, wherein the pattern is a pseudo-random noise pattern. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for an apparatus according to claim 5, wherein the pattern is a pseudo-random noise pattern. it in a predetermined pattern of encrypted and unencrypted packs of the first signal.

Appealed claim 7

Appealed claim 7 defines an apparatus according to claim 6, wherein the pseudo-random noise pattern is constructed by a linear feedback shift register. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for an apparatus according to claim 6, wherein the pseudo-random noise pattern is constructed by a linear feedback shift register.

Appealed claim 10

Appealed claim 10 defines subject matter for an apparatus according to claim 22 9, wherein a key detection algorithm is used to select the key and to decode from which group of keys said key has been selected. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for an apparatus according to claim 6, wherein the pseudo-random noise pattern is constructed by a linear feedback shift register.

The rejection alleges that appealed claim 10 is obvious under the provisions of 35 U.S.C. §103(a) as being unpatentable over *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz*. The examiner admits that the combination of *Glogau et al.* with *Bloom et al.* and *Wirtz* does not disclose or suggest selecting the key from at least one of two groups of keys. The examiner has taken Official Notice that is old and well known to have more than one key available in the system. The examiner alleges that *Taguchi et al.* (U.S. Patent No. 5,915,025) teach multiple groups with multiple keys. The appellants assert that *Taguchi et al.* do not disclose or suggest an apparatus as defined by claim 10, wherein a key detection algorithm is used to select the key and to decode from which group of keys said key has been selected an

apparatus as defined by claim 11, wherein the decoding algorithm comprises an examining process of the outcome of projecting an n-bit key onto a set of fixed n-bit numbers.

Appealed claim 11

Appealed claim 11 defines subject matter for the apparatus of claim 10, wherein the decoding algorithm comprises an examining process of the outcome of projecting an n-bit key onto a set of fixed n-bit numbers. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for the apparatus of claim 10, wherein the decoding algorithm comprises an examining process of the outcome of projecting an n-bit key onto a set of fixed n-bit numbers.

The rejection alleges that appealed claim 11 is obvious under the provisions of 35 U.S.C. §103(a) as being unpatentable over *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz*. The appellants assert that appealed claim 11 defines the decoding algorithm comprises an examining process of the outcome of projecting an n-bit key onto a set of fixed n-bit numbers. The rejection fails to find this and therefore does not make establish a *prima facie* case of obviousness.

Appealed claim 12

Appealed claim 12 defines subject matter for the apparatus of claim 11, wherein said examining process takes the form of going down a binary tree, where said going left is caused by projection-value 0 and right by projection in value non-zero. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for the apparatus of claim 11, wherein said examining process takes the form of going down a binary tree, where said going left is caused by projection-value 0 and right by projection in value non-zero.

The rejection alleges that claim 12 is obvious under the provisions of 35 U.S.C. §103(a) over *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz*. The examiner states that the combination of *Glogau et al.* with *Bloom et al.* and *Wirtz* does not disclose or suggest that the examining process takes the form of form of going down a binary tree, where going left is caused by projection-value 0 and right by projection in value non-zero. The examiner has taken Official Notice that is old and well known to use a binary search for more

efficient searching and also that in a binary tree going one direction is caused by one projection value and another direction caused by another projection value. The examiner cites “Algorithms”, second edition, 1988, ISBN; 0201066734, pg. 198 by Robert Sedgewick (hereinafter *Sedgewick*) for support of this allegation. The appellants, respectfully point out that pg. 198 of *Sedgewick* simply discuss binary searches, discussed in a manner akin to sorting algorithms, to find any given key v . The appellants assert that *Sedgewick* does not disclose or suggest an examining process that takes the form of going down a binary tree, where said going left is caused by projection-value 0 and right by projection in value non-zero as defined by appealed claim 12.

Appealed claim 21

Regarding appealed claim 21, the XOR function taught by *Glogau et al.* does not disclose or suggest the linear feedback shift register is over Galois Field GF(s), and its output is 1/s biased by interpreting emitted symbols “0”...’s-n-1’ as ‘unencrypted’ and ‘s-n’...’s-1’ as ‘encrypted’ for the reason previously discussed in the response to the rejection under *Bloom et al.*

Appealed claim 21 defines subject matter for an apparatus according to appealed claim 7, wherein the linear feedback shift register is over Galois Field GF(s), and its output is 1/s biased by interpreting emitted symbols “0”...’s-n-1’ as ‘unencrypted’ and ‘s-n’...’s-1’ as ‘encrypted’. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for the apparatus of claim 7, wherein the linear feedback shift register is over Galois Field GF(s), and its output is 1/s biased by interpreting emitted symbols “0”...’s-n-1’ as ‘unencrypted’ and ‘s-n’...’s-1’ as ‘encrypted’.

Appealed claim 21

Appealed claim 22 defines subject matter for an apparatus according to claim 1, wherein the second signal is embedded in the first signal by selecting a key for at least partly encrypting the information from one of at least two groups of keys. There is no disclosure or suggestion within the combination made by *Glogau et al.* in view *Bloom et al.* and further in view of *Wirtz* for the subject matter for the apparatus of claim 1, wherein the second signal is

embedded in the first signal by selecting a key for at least partly encrypting the information from one of at least two groups of keys.

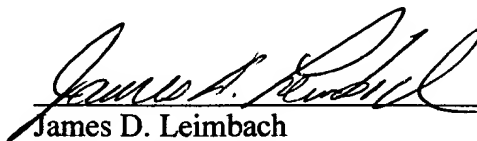
Regarding appealed claim 22, the rejection takes Official Notice that it is old and well known to protect data signals using by encrypting the data signals using encryption keys. The appellants, respectfully, assert that it is not well known to embed a second signal in the first signal by selecting a key for at least partly encrypting the information from one of at least two groups of keys as defined by appealed claim 22. The appellants previously requested that the examiner produce prior art references illustrating that it is well known to embed a second signal in the first signal by selecting a key for at least partly encrypting the information from one of at least two groups of keys as defined by appealed claim 22. The examiner has not produced any prior art references illustrating that it is well known to embed a second signal in the first signal by selecting a key for at least partly encrypting the information from one of at least two groups of keys as defined by appealed claim 22. Therefore, the taking of Official Notice is deemed withdrawn.

Conclusion

In summary, the examiner's rejections of the claims are believed to be in error for the reasons explained above. The rejections of each of claims 1-7 and 10-20 should be reversed.

The Commissioner is authorized to charge fees associated with the filing of this brief to Account No. 50-3745 including any underpayments, excluding the payment of any issue fees, and to credit any overpayments to the same account.

Respectfully submitted,


James D. Leimbach
Attorney for Appellants
Registration No. 34,374

Telephone: 585-381-9983
Facsimile: 585-381-9983

Serial No. 09/853,174

APPENDIX I. Evidence on Appeal

“None”

APPENDIX II. Related Proceedings

“None”

APPENDIX III. Claims on Appeal

1. An apparatus for reading out information from an information carrier, the information including at least a first signal of at least partly encrypted content, comprising:
 - means for detecting a second signal logically embedded in the first signal wherein the second signal contains a single bit trigger,
 - means for detecting a physical mark used for storing at least part of the information on the information carrier, and
 - means for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.
2. An apparatus according to claim 1, wherein the apparatus is a CD-or a DVD- player.
3. An apparatus according to claim 1, wherein the physical mark is a wobble.
4. An apparatus according to claim 1, wherein the single bit trigger is contained within a message containing encrypted and unencrypted packs.
5. An apparatus according to claim 1, wherein the second signal is embedded in the first signal by encoding it in a predetermined pattern of encrypted and unencrypted packs of the first signal.
6. An apparatus according to claim 5, wherein the pattern is a pseudo-random noise pattern.
7. An apparatus according to claim 6, wherein the pseudo-random notice pattern is constructed by a linear feedback shift register.
10. An apparatus according to claim 22, wherein a key detection algorithm is used to select the key and to decode from which group of keys said key has been selected.
11. Apparatus of claim 10, wherein the decoding algorithm comprises an examining process of the outcome of projecting an n-bit key onto a set of fixed n-bit numbers.

12. Apparatus of claim 11, wherein said examining process takes the form of going down a binary tree, where said going left is caused by projection-value 0 and right by projection in value non-zero.

13. A method of reading out information from an information carrier, the information including at least a first signal of at least partly encrypted content, comprising the steps of:

detecting a second signal logically embedded in the first signal wherein the second signal contains an encrypted trigger,

detecting a physical mark used for storing at least part of the information on the information carrier, and

refusing playback of the information read from the information carrier if the second signal but no physical mark has been detected.

14. An apparatus for storing information on an information carrier, the information including at least a first signal of at least partly encrypted content, comprising:

means for using a physical mark for storing at least part of the information on the information carrier, and

means for logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which second signal contains a single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

15. An apparatus according to claim 14, wherein the apparatus is a CD-or a DVD-recorder.

16. A method of storing information on an information carrier, the information including at least a first signal of at least partly encrypted content, comprising the steps of: using a physical mark for storing at least part of the information on the information carrier, and logically embedding a second signal in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, the second signal containing a

single bit trigger that may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

17. An information carrier for storing information including at least a first signal of at least partly encrypted content, comprising:

a physical mark for storing at least part of the information on the information carrier, and a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, the second signal containing a single bit trigger that may be used for refusing play back of the information read from the information carrier if a second signal but no physical mark has been detected.

18. An information carrier according to claim 17, wherein the information carrier is a CD-or a DVD-disc.

19. A method of exchanging copy protection information for protecting information stored on an information carrier including at least a first signal of at least partly encrypted content, wherein:

a physical mark is used for storing at least part of the information on the information carrier, the copy protection information includes a second signal containing a single bit trigger logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier, which copy protection information may be used for refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

20. A copy protection system for exchanging copy protection information for protecting information stored on an information carrier including at least a first signal of at least partly encrypted content, comprising:

an apparatus for storing information on an information carrier as claimed in Claim 14 and an apparatus for reading out information from an information carrier, wherein the copy protection information including a second signal logically embedded in the first signal indicating that a physical mark is used for storing at least part of the information on the information carrier is exchanged between both apparatuses, which copy protection information may be used for

refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

21. An apparatus according to claim 7, wherein the linear feedback shift register is over Galois Field $GF(s)$, and its output is 1/s biased by interpreting emitted symbols "0"... 's-n-1' as 'unencrypted' and 's-n'...'s-1' as 'encrypted'.

22. An apparatus according to claim 1, wherein the second signal is embedded in the first signal by selecting a key for at least partly encrypting the information from one of at least two groups of keys.